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# ORATIO Apologetica

Pro RE HERBARIA.

Contra Medicos Mathematicos.

Habita *Hampstadii*, in Pharmacopœiorum *Londinensium* Comitibus Botanicis, anni præteriti ultimis.

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A

## S P E E C H

Made at *HAMPSTEAD*

At the Conclusion of the last Year's BOTANICK MEETINGS of the Worshipful Company of *London* APOTHECARIES.

Wherein is given the Idea of *Vegetation*, and a Plea for the Use of *Botany* in Physick, against the Neglect of it, in Favour of *Mathematicks*.

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By BLACKERBY FAIRFAX, Dr. of Physick.

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L O N D O N:

Printed and Sold by JAMES BETTENHAM, at the Crown in *Pater-Noster-Row*. 1718. Price 3 d.

Where is to be had a Speech made by the same Author at the Beginning of last Year in Praise of *Botany*.



# ORATIO Apologetica

Pro RE HERBARIA.

Contra Medicos Mathematicos.

Habitu Hæroptæ, in Pharmatopœia, et  
æconomia Comitibus Botaniciis, anni prædicti in  
tunis

A

## SPECH

Made at HERBARIUM



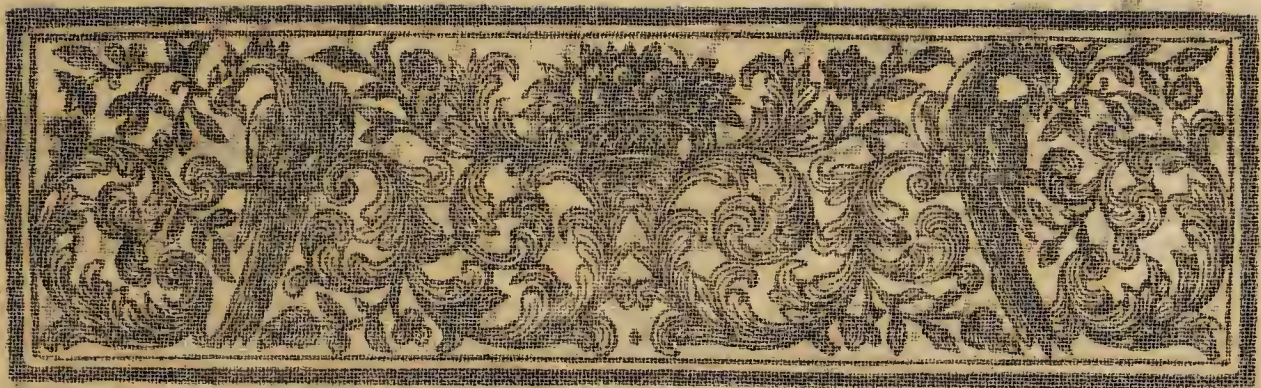
At the Conclusion of the 1st Year's Botanical  
Course of the University of London  
AND THESE ARE

Wherein is given the Idea of the Garden, and a Plan for  
the Use of it, in English, against the Neglect of it  
in Favor of the

By BENJAMIN FARNSWORTHY, M.D. of London

Printed and Sold by J. G. ALLEN, at the  
University Press, 1800.  
Whereas it is hereby declared, that the  
University of London, in the Year 1800





To the most Potent PRINCE,  
*John*, Duke of MONTAGUE,  
Knight of the most Noble Order  
of the Garter, &c.

And to the most Excellent NATURALIST,  
*Sir Hans Sloane*, Bar<sup>c</sup>. M. D.  
Prince of Botanists,

Fellows of the College of *PHYSICIANS*.

MOST ILLUSTRIOUS,



HE Conquerors of barba-  
rous Nations, and the Hun-  
ters down of Beasts of Prey,  
have not been more cele-  
brated in the Annals of Fame, than  
the Inventors and Improvers of use-  
ful Arts and Sciences have been; e-



## DEDICATION.

ven by those mighty Pagans, who have placed their chief Happiness in Monumental Glory. For as the Former render us free Agents by delivering us from our Fears; so without the Latter our peaceful Security would be little better than a State of Inactivity. For each of which parts of heroick Virtue we see Your Grace distinguishably form'd. Your Skill in the use of the Sword, and Your Knowledge in military Institutes, may at some time give You opportunity to pursue Your Father's Steps to conquest. But 'tis Nature only can give that Benignity of Temper we see shining in your domestick Oeconomy, and which has truly adapted Your Grace for an *Apollinean* Opifer, a Fellow of the College of Physicians. Such the *Oriental Mithras* was, and such was the *Egyptian Horus*, when the World knew no other Medicine but Plants.



## D E D I C A T I O N.

Plants. And if the wanton Disquisitions of later Days have introduced many plausible Novelties among us, foreign to the animal Kingdom, 'tis hoped, that the Building may not over-top its Foundation. And that as Your Grace has thought the learned Art of Physick deserving Your Favour; an Apology for the due Esteem of so material a Part of it as is Botany may not be unworthy Your Grace's Notice, and the Science Your Encouragement. So that in the Times of Peace and War, You may be equally illustrious; whether the Honour of Your Country calls You to the one, or the peaceable Good of it to the other.

Your Princely Gift, Sir *Hans*, to the Garden of *Chelsea*, has at once perpetuated the Memory of Your Skill in Botany, and secured the grateful Acknowledgments of the many



## D E D I C A T I O N.

many Lovers of the Science, who are like to receive the Benefit of it.

And when your glorious Example shall have kindled an Emulation of such laudable Actions in the Body of that learned College, which you adorn with Membership; 'tis hoped we may see a Physick-Garden in *England*, no ways inferiour to any beyond Sea; and that we may exceed Foreigners, as much in opportunities of Improvement in Physick, as our Physicians do theirs, in the judicious Practice of it; which happy Days none would with more Gladness see, than, may it please,

*Most Illustrious,*

*Your most Humble and*

*Obedient Servant,*

Bl. FAIRFAX.





## O R A T I O.

## The S P E E C H.

*Viri Doctissimi, Magistri  
Artis Pharmaceuticæ.*

*Juventus Ingenua.*

**T**Andem valedicendum  
est manfueti hujus So-  
cietatis Præsidio, novum bo-  
næ spei mox daturus. Tan-  
dem vacare oportet lautis  
Coryphæorum epulis, imi-  
tandis, non antefereendis. Tan-  
dem ad finem sunt perducta  
hujusce anni exercitia Bota-  
nica. Et æstivi temporis spa-  
tium, herbæ ætas, vobis de-  
dit incruentis incumbere dis-  
sectionibus; & plantas, ab in-  
cunabilis ad interitus suos, con-  
templari. Contemplari, Ut  
à radícula, è plantulâ semina-  
li protrusa, primordia ducant:  
Ut à succo in cotyledonibus  
præparato embryon enutri-  
atur, usque dum spongiosum  
ejus corpus terrenum hu-  
midum incipit lactere. Ut  
explicatæ cymatum fibræ in  
herbaceam & ligneam sub-  
stantiam transeant, & in cau-  
les, truncos, ramos, folia, flo-  
res

Most Learned Doctors,  
Master Apothecaries.

Ingenuous Youth.

**A**T length we are to bid adieu  
to the courteous Gover-  
nors of this Society, and to see  
their Places supplied by hopeful  
Successors. At length is come a  
vacation from the Entertain-  
ments of our Leaders, which  
may admit of Imitation, but not  
outdoing. At length the Bota-  
nical Exercises of this Year are  
brought to conclusion. And the  
Space of a Summer, the Age of  
a Plant, has given you oppor-  
tunity of being employed in blood-  
less Dissections, and to survey  
Herbs, from their Cradles to their  
Graves. To Survey, How from  
the Radicle emitted from the  
Seed they take their Origin:  
How from the Juice prepared  
in the seminal Secundines, the  
Embryo is nourished; till its spon-  
gy Body is fit to suck the earthy  
Moisture: How the unfolded  
Fibres of Sprouts pass into her-  
baceous and woody Substances;  
and



res, fructus evehæ, varia for-  
ment vasa, ærii contenti,  
& dissimilis liquidi capacia.  
Ut hæ fibræ quandoque ac-  
quirant subtilitatem sensus  
æmulam, minutas cum my-  
tilorum genere confundentes:  
Ut vegetabilia fluida circuitus  
peragant, non secus ac ani-  
malia: utique per varios per-  
colata utriculos, diversum  
audiant nomen, diverso in-  
serviant usui; plantæque, ve-  
luti pecudes in gummi & re-  
sinis lactifera sua evacuent  
vasa, in vitæ humanæ com-  
modum. Ut sexu differant,  
& prout infini ordinis ani-  
malia, singulæ usitatissimè sint  
Androgynæ. Ut pitillum ute-  
ri farinaceam Venerem ab  
apicibus staminum sparsam,  
sitiens capter, interiùsque re-  
condat; sive hæc generatio-  
nis organa eodem flosculo  
contineantur, sive contigu-  
itate distent, sive totis etiam  
plantis à fructibus summo-  
veantur. Ut insectorum in-  
modum, post peractum gene-  
tionis officium, partos fru-  
ctus & ejecta semina, viven-  
di fine perfunctæ esse vide-  
antur; nam quamvis multa-  
rum stirpium magna pars  
annuam eviret mortem, ta-  
men multo major est ea ve-  
getabilium portio, quæ hye-  
mali

and when carried up into Stalks,  
Trunks, Boughs, Leaves, Flowers,  
Fruits, form various Vessels, ca-  
pable of an ærial Content, and  
a dissimilar liquid. How these  
Fibres sometimes acquire a Sub-  
tlety so near a-kin to Sense, that  
it is difficult to say whether the  
sensible Plants are to be called  
Animals, or the Muscle-kind to  
be esteemed Plants: How the ve-  
getable Fluids circulate as well as  
the animal: And when strained  
thro' various globular Glands,  
they obtain different Names,  
and serve to different Uses; so  
that Plants, like Milch-Cattle,  
in Gums and Balsams evacuate  
their lactiferous Vessels to the Ad-  
vantage of Mankind: How they  
differ in Sex, and like the lower  
Rank of Animals, are usually  
each of them Hermaphrodites.  
How the Pitillum of the Ute-  
rus attracts the Male-dust shed  
from the Summits of the Chivies;  
as the parch'd Earth drinks up  
Showers, or like that Feminine  
Suction which is in the Extasy  
of animal Conception; whether  
these Organs of Generation are  
contained in the same Flower, or  
are separated to a contiguous di-  
stance, either in the same, or  
different Plants: How, in the  
manner of Insects, after having  
performed the Office of Generati-  
on, and brought forth their Fruits,  
all such Plants wither and



mali succumbens frigori Mar-  
cescit, Cadit, Interit.

Contemplatio fanè homini  
pio satis grata ; homine phi-  
losopho admodum digna, ho-  
mini medico cui in professo-  
res est, quid natura faciat  
aut ferat perferutari, summe  
certè utilis, si non necessaria  
est habenda.

Rectum est index sui &  
obliqui. Et qui directos na-  
turæ cursus ignorat, ejus de-  
viations nunquam callebit :  
qui naturalem & sanum cor-  
poris statum non novit, præ-  
ternaturalem & morbosum  
neutiquam ritè noverit : in-  
gressusque labyrinthum phy-  
sicum nusquam se extricabit,  
nisi Analogismum adhibuerit  
ducem.

Itaq; non satis mirare queo  
naturalem historiam & ana-  
tomiam comparativam per  
tantos retro annos & tantâ  
laude à nostris physicis ex-  
cultas, præ Mathesi de nupe-  
ro vilescere. Ac si *Eterna*  
*Idea* in animatione, admini-  
culis uteretur humanis, & no-  
stri

and dispensed their Seed, they  
seem to have answered the End  
of their Creation. For altho' a  
great part of many Plants avoids  
an annual Death, yet much grea-  
ter is that vegetable Portion,  
which oppressed by each Winter's  
Cold, fades, falls, dies.

A Survey to a pious Man suf-  
ficiently acceptable; to a Philoso-  
phical Head an agreeable Amuse-  
ment; to a Physician, whose Pro-  
fession it is to observe what Na-  
ture will do or suffer, certainly  
to be accounted highly useful, if  
not necessary.

A strait Line is the Index of  
it self, and Obliquity; and he  
who does not know the direct  
Course of Nature, will never  
understand its Deviations; he  
who is ignorant of the natural  
and healthy State of the Body,  
will never be rightly Skilled in  
the præternatural and diseased  
State of it. And whosoever en-  
ters the Labyrinth of Physick, is  
never like to pass thro' it, but  
by help of the Clue of Analogism.

Therefore I know not how suf-  
ficiently to admire, that natural  
History and comparative Anato-  
my which have been so commenda-  
bly cultivated among us by our  
Physicians for many years past,  
should of late be laid aside for the  
Study of Mathematicks, as if the  
Eternal Idea, built by Mechanick

B

Powers



stri cum divinis moduli sint conferendi.

Metienda tellus est; sonus est modulandus; & cœli spatia mensuræ subjiciuntur. At quis invisibilibus, inaudientis, intractandis dabit modum?

Dari in corpore animato trochleas, hypomodlia, vectes anatomistarum quispiam facili negotio fingat. Quis tamen spiritus animales, actionum animalium momenta, dimetietur, dicam an definiet?

Vasa sanguifera esse officiis suis proportionata quis dubitat? At quis vim cordis impulsivam, cruentæ circulationis dominam proportioni reducet?

Ab inoculatione satis constat fluidi contenti diversitatem, à diversâ canalium secermentium structurâ pendere; at quis diametros tubulorum, aciem opticam fugientium metiri tentabit?

Sunt & hæc fundamenta Algebraicis æquationibus apta? & hiccine est debitus magnæ artis matheseos usus?

Et

Powers, and humane Modules, were to be compared with divine.

The Earth is to be measured; Sound is to be set to Tune; and even the immense Space of the Heavens is reducible to Mensuration. But who shall reduce to measure that which our Sight can't attain to, our Ear be affected with, or our Fingers handle?

That there are in animate Body, Pullies, Rests, Leavers, &c. any Anatomist may with Plausibility enough make appear. But who shall measure, shall I say, or define, these animal Spirits, which are the Spring of all animal Action?

That the Blood-Vessels are proportion'd to their proper Offices, who doubts? But who shall confine to measure, that Lord of the Blood's Circulation, the impulsive Force of the Heart?

From Inoculation it is manifest, that the diversity of the contained Fluid depends upon the divers Structure of the Secerning Channels. But who shall undertake the Mensuration of the Diameters of those Tubes, which the nicest Glasses can never give us a Sight of?

Are these Foundations proper for Algebraical Equations to be built upon? Is this the genuine use of that great Art Mathematicks?

And



At quæ tanta ad augendam Therapeutice attulere medici hi mathematici?

Hic demonstrat moleculas in Scotomiis visuales non esse revera corpora in humoribus oculi fluitantia.

Alter ait venena pollere videndi vitam ob aculeatas quibus constant particulas.

Pulchra sane inventa, & tanto digna hiatu!

Sic falsas mirantur quidam mentis vires, dum veras negligunt.

Novas naturæ leges machinantur, dum notas majoris pretii prætereunt.

In Pitcairni magistri sui phantasmata jurant, dum ab Experimentalis Philosophiæ Cynosurâ Bacono aberrunt. Vilique pendent grande ejus axioma——*Tantum quisque in physicis proficisse dicendus est, quantum de naturæ ordine observavit.*

Est natura uspiam videnda, incompositis, incoactis viribus agens? Sponte nascentia produciens est videnda. Sunt ejus ordo & pulchra varietas admiranda? In specificis plantarum differentiis sunt

*And after all, what so great Matters towards improving the Therapeutick Art have these Mathematical Physicians brought us.*

*One of them at great Expence of Algebra proves, that the Motes which in Scotomias we seem to have in our Eyes, are not real Bodies fluctuating in them.*

*Another demonstrates, that the Power Poisons have to quench Life, proceeds from the aculeated Particles they are composed of.*

*Great Discoveries indeed, and worthy so much Clutter!*

*Thus do some vainly admire the false Powers of human Understanding, while they neglect the true ones.*

*They are for contriving new Laws of Nature, while they pass by known ones of greater Value.*

*They pin their Faith upon their Master Pitcairn's Sleeve, forsaking that great Guide to the experimental Philosophy Bacon, and undervaluing that great axiom of his--so much Proficiency shall any one be accounted to have made in Physicks, as are the Observations he has made in the order of Nature.*

*Is Nature any where to be seen acting with uncompounded, unforced Power? in her spontaneous Product she is to be observed. Is her Beauty delightful to behold? The Culture of Flowers is delightful.*



funt admiranda. Est ejus venustas decora spectatu delectabilis? Cultura florum est delectabilis. Est scientia à multiplici usu æstimanda; hoc etiam nomine Botanice est æstimanda. Est Paradisus copiosa amænitas? hortus est paradisus.

Jactat antiquitas hesperidum hortos. Et nunc etiam jactat Batavia suos Lugdunenses, Gallia, Parisienses, Germania, Lipsienses; Italia, Patavinos; quicquid fama canit, id vobis donat Pharmacopeiorum Londinensium societas in hortis Chelseianis & Randianâ solertiâ.

Quicquid agunt homines ut lucrentur agunt. Et post exantlatos labores & evitata pericula, dulce otium optat & animosus & industrius. At quos ad honestas actiones urget fruendi voti voluptas, eos ut plurimum terret agendi cura. Hisce comitiis duplicis fuistis compotes utilitatis, his habuistis negotium absque anxietate, cum emolumento otium.

Vobis itaque Præsidi & Custodibus morum candore insignibus, vobisque lautis coryphæis sint prosperi dies, & læta res, qui nobis hæc utilia otia fecistis.

*ful. Is a Science to be esteemed for its various use? Even in this respect is Botany to be esteemed. Is Paradise Pleasure in abundance? A Garden is a Paradise.*

*Antiquity boasts of the Garden of Hesperides. And at this Day Holland boasts of theirs of Leyden, France theirs of Paris, Germany theirs of Lipsick, Italy theirs of Padua. Whatsoever ye have in the relations of Fame, that does the Society of London Apothecaries give ye in the Garden of Chelsea, and the Diligence of Mr. Rand.*

*All Men propose some Advantage in their Actions. And after the greatest toil, and escapes from Danger, Leisure and Ease are in the Wishes of the Men of Courage as well as the Industrious: But they whom the Pleasure of obtaining their Desires would put upon honourable Actions, are generally deterred from them, by the trouble of putting them in Execution. In these Assemblies ye have had a two-fold Profit. Here ye have had Employment without Anxiety, and Pleasure with Profit.*

*Therefore may Health and Happiness attend ye courteous Master and Wardens, and ye generous Leaders, to whom we owe these useful Pleasures we have had.*

F I N I S.















